

Notice of Allowability

Application No.

10/749,636

Applicant(s)

LILES, WILLIAM S.

Examiner

Gregory J. Strimbu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment of 5/5/06 and the tele. int. of 7/19/06.
2. ☒ The allowed claim(s) is/are 21-28.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>7/19/06</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date ____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other ____. |

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michael E. Martin on July 19, 2006.

The application has been amended as follows:

In the title:

changed the title to --SPRING ASSISTED SWING DOOR OPERATOR--

In the claims:

amended the following claims as follows:

21. A motorized operator for a swing door comprising:

a frame;

a motor supported on said frame;

a gear reduction drive mechanism supported on said frame and drivenly connected to said motor, said gear reduction drive mechanism including an output shaft having a part configured for connection to the a-door for moving said door in one direction and an opposite direction;

a sprocket connected to said output shaft and drivingly engaged with a chain partially wrapped around ~~trained over~~ said sprocket, said chain having opposed runs;

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a single coil spring ~~energy storage member~~ supported on said frame;

an elongated shaft supporting a member engaged with said spring at one end of said spring for transmitting forces to and from ~~exerting compression forces on~~ said spring ~~and returning compression forces through~~ said elongated shaft; and

a link member connected to said elongated shaft and directly connected to said opposed runs of said chain, whereby, in response to rotation of said output shaft in a first ~~one~~ direction one of said runs becomes taut and the other run becomes slack to compress said spring and store energy in said spring, and said spring is operable to return said energy through said one run to said output shaft to rotate said output shaft in an a second direction opposite to said first direction for assisting ~~to assist in~~ movement of said door.

23. The operator set forth Claim 21 wherein:

said frame includes a pair of spaced apart plates for supporting parallel shafts of said gear reduction drive mechanism and for supporting ~~including~~ said output shaft.

24. The operator set forth in Claim 23 wherein:

said frame includes opposed end plates connected to said pair of spaced apart plates, one of said end plates supporting said motor and the other ~~opposite~~ end plate operably engaged with said spring.

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25. The operator set forth Claim 24 wherein:

said frame includes opposed faces each selectively mountable ~~mounted on a~~
support plate for selective positioning of said frame with respect to said support plate.

27. A motorized operator for a swing door comprising:

a frame;

a motor supported on said frame;

a gear reduction drive mechanism supported on said frame and drivenly
connected to said motor, said gear reduction drive mechanism including an output shaft
having a part configured for connection to said a door for moving said door in one
direction and in an opposite direction;

a sprocket connected to said output shaft and drivingly engaged with a roller
chain partially wrapped around ~~trained over~~ said sprocket, said chain having opposed
runs;

a single coil spring ~~energy storage member~~ supported on said frame;

an elongated shaft supporting a member engaged with said spring at one end of
said spring for transmitting forces to and from ~~exerting compression forces on said~~
spring ~~and returning compression forces through~~ said elongated shaft; and

a link member mounted for limited pivotal movement on said elongated shaft and
directly connected to said opposed runs of said chain, whereby, in response to rotation
of said output shaft in a first ~~one~~ direction one of said runs becomes taut and the other
run becomes slack to compress said spring and store energy in said spring, and said

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spring is operable to return said energy through said one run to said output shaft to rotate said output shaft in a second an opposite direction opposite to said first direction for assisting to assist in movement of said door.

28. A motorized operator for a swing door comprising:

a frame including a pair of spaced apart plates and opposed end plates connected to said pair of spaced apart plates;

a motor supported on said frame at one of said end plates;

a gear reduction drive mechanism supported on said spaced apart plates and drivenly connected to said motor, said gear reduction drive mechanism including an output shaft having a part configured for connection to said a door for moving said door in one direction and in an opposite direction;

a sprocket connected to said output shaft and drivenly engaged with a chain partially wrapped around trained over said sprocket, said chain having opposed runs;

a single coil spring energy storage member supported on said frame at the other of said end plates;

an elongated shaft supporting a member engaged with said spring at one end of said spring for transmitting forces to and from exerting compression forces on said spring and returning compression forces through said elongated shaft; and

a link member connected to said elongated shaft and directly connected to said opposed runs of said chain, whereby, in response to rotation of said output shaft in a first one direction one of said runs becomes taut and the other run becomes slack to

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compress said spring and store energy in said spring, and said spring is operable to return said energy through said one run to said output shaft to rotate said output shaft in a second an opposite direction opposite to said first direction for assisting to assist in movement of said door.

Drawings

The following changes to the drawings have been approved by the examiner and agreed upon by applicant: In figure 3, delete reference character "16a" and its attendant lead line shown at the upper side of the figure. In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

Reasons for Allowance

The following is an examiner's statement of reasons for allowance: the prior art of record, absent applicant's own disclosure, fails to teach the entire combination of elements set forth in the claimed invention. Specifically, the prior art of record fails to teach a link member connected to the elongated shaft and directly connected to the opposed runs of the chain. See lines 14-15 of claim 21, lines 15-16 of claim 27 and lines 16-17 of claim 28.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory J. Strimbu whose telephone number is 571-272-6836. The examiner can normally be reached on Monday through Friday 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Chilcot can be reached on 571-272-6777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read "Gregory J. Strimbu", with a long horizontal flourish extending to the right.

Gregory J. Strimbu
Primary Examiner
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July 19, 2006